Filing Date: July 2, 2003

Title: CIRCUITS AND METHODS FOR ALIGNMENT OF SIGNALS IN INTEGRATED CIRCUITS

Assignee: Intel Corporation

REMARKS

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Dkt: 884.926US1 (INTEL)

This responds to the Office Action mailed on July 12, 2004.

Claims 1-3, 6, 15-17, 19, 20, 22, 25, and 28 are amended. Claims 1-29 are now pending in this application.

Formal Drawings

Formal drawings are submitted herewith. No changes have been made to the drawings, except to formalize them.

Objection to the Specification

The specification was objected to because the summary of the invention section and its header were missing. Applicant respectfully requests reconsideration.

According to 37 CFR 1.73 and MPEP 608.01(d):

"A brief summary of the invention indicating its nature and substance, which may include a statement of the object of the invention, should precede the detailed description. Such summary should, when set forth, be commensurate with the invention as claimed and any object recited should be that of the invention as claimed."

Applicant respectfully points out that the term "should" means "not required". Therefore, Applicant submits that the "summary of the invention" is not required.

In other sections of 37 CFR, the term "must" instead of "should" is used when a specific item "must" be included in the specification. For example, according to 37 CFR 1.72 and MPEP 608.01(b):

"A brief abstract of the technical disclosure in the specification must commence on a separate sheet, preferably following the claims, under the heading "Abstract of the Disclosure." The purpose of the abstract is to enable the Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure. The abstract shall not be used for interpreting the scope of the claims."

Thus, in 37 CFR 1.72, the term "must" is used to indicate that the abstract is required in the specification. In contrast, in 37 CFR 1.73, the term "should" is used to indicate that the summary of the invention is not required in the specification.

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

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In view of the reasons presented above, Applicant requests that the objection to the specification be reconsidered and withdrawn.

Claim Objections

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Claims 15 and 16 were objected to because of informalities. The Examiner stated that in claim 15, line 2 "the internal signal" should be changed to "the internal clock signal", and in claim 16, lines 3-4 "the clock generator" should be changed to "the external clock signal".

Claims 15 and 16 are amended for clarity.

§102 Rejection of the Claims

Claims 1, 5, 16, 18, and 21 were rejected under 35 USC § 102(e) as being anticipated by Konuk et al. (U.S. 6,756,827).

Independent claim 1 is amended. As amended, claim 1 recites, among other things, "an alignment unit coupled to the at least one phase lock loop and the ratio decoder, wherein the alignment unit includes a master pulse generator to generate a master pulse based on a combination of the at least one core signal and a modified copy of the external signal to synchronize a plurality of copies of the master pulse with the external signal based on the programming code". Applicant is unable to find in Konul et al. "an alignment unit coupled to the at least one phase lock loop and the ratio decoder, wherein the alignment unit includes a master pulse generator to generate a master pulse based on a combination of the at least one core signal and a modified copy of the external signal to synchronize a plurality of copies of the master pulse with the external signal based on the programming code". Accordingly, Applicant requests that the rejection be reconsidered and withdrawn and that claim 1 and dependent claim 5 be allowed.

Independent claim 16 is amended. As amended, claim 16 recites, among other things, "an alignment unit coupled to the internal signal generating unit and the ratio decoder, wherein the alignment unit includes a master pulse generator to generate a master pulse based on a combination of the at least one core signal and a modified copy of the external signal to synchronize a plurality of copies of the master pulse with the external signal based on the programming code". Applicant is unable to find in Konul et al. "an alignment unit coupled to the

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internal signal generating unit and the ratio decoder, wherein the alignment unit includes a master pulse generator to generate a master pulse based on a combination of the at least one core signal and a modified copy of the external signal to synchronize a plurality of copies of the master pulse with the external signal based on the programming code". Accordingly, Applicant requests that the rejection be reconsidered and withdrawn and that claim 16 and dependent claims 18 and 21 be allowed.

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Allowable Subject Matter

Claims 2-4, 6, 17, 19, 20, and 22 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2, 3, 6, 17, 19, 20, and 22 are rewritten only to put them in independent form. The scopes of these claims are not altered. Thus, claims 2, 3, 6, 17, 19, 20, and 22 are in condition for allowance. Claim 4 depends from claim 3. Therefore, claim 4 is also in condition for allowance.

Applicant acknowledges the allowance of claims 7-15 and 23-29.

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Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's representative ((612) 373-6969)) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 4 day of August, 2004.

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Name